
Assignment and Objective: You will write an original paper related to a topic in Applied Forest Ecology. The purpose of this assignment is to allow you to: (i) learn more about a specific topic in Applied Forest Ecology; and (ii) develop communication skills. You will research a topic, and synthesize what you learn with what you have learned in this and other courses. In so doing, you will take ownership over the material instead of simply studying topics assigned to you. Writing is an essential means of communication in any profession, is a great learning tool, and allows you to develop and present your thoughts logically and succinctly. Your term paper, in almost all cases, will take the form of a literature review. However, you are also welcome to write-up original research if you have the data to do such. Feel free to use a topic that is closely related to your internship, research, capstone experience, and/or professional aspirations. However, remember that this assignment requires original work (i.e., not something that you already turned in or will turn in to another instructor, your advisor, etc.). Each student will write an individual paper (i.e., no group efforts) and, in as much as possible, avoid choosing the same topic.

- Your term paper is due by May 1 at the beginning of class (printed, and hand-delivered to your instructor). Please feel free to turn it in anytime before then. Anyone who does not turn in their paper by this date/time will receive a 0. Remember that your term paper is worth 100 points (20% of your final grade).

General Guidelines: Use the following guidelines when writing your paper. Feel free to ask the instructor for clarification, suggestions, etc.

- Any topic is game for your term paper as long as it deals with some aspect of Applied Forest Ecology (silviculture, forest restoration, or forest conservation) and as long as your instructor approves the topic. As much as possible, your topic should focus on the tropics and, ideally, Hawai‘i. This is a great opportunity to explore an area that we are unable to cover in class, that we did not cover in much detail, and/or that is pertinent to your professional aspirations.
  - Whatever the chosen topic, your paper must, at a minimum, include a section on the implications of the topic/research/current state of knowledge for Hawai‘i.

- You must have your topic approved by the instructor no later than Thursday, March 14. To get your topic approved you need to: (i) email the instructor a tentative title and one paragraph summary of your proposed topic (as a Word attachment); and (ii) meet with the instructor and TA for feedback on this document (both prior to 03/14/13).

- You may use a combination of primary research papers, reviews, and other sources, but must include at least 5 primary research papers published in 1995 or later as sources.

- You should review a topic or concept fully, backing it by relevant literature, identifying the gaps in our understanding, and the relevance of the topic to Hawai‘i.

- Comments on Content: Your paper should be substantive, reviewing the major facts, studies, interpretations and areas of controversy for the chosen topic. It should be more than a series of reports on different journal articles strung together. You should organize and synthesize the material in a meaningful way. Ideas and statements should be supported as needed by properly citing the results of studies, or with logical arguments. Inconsistencies between studies should be noted if they exist. Sometimes it may be appropriate to critique the methodology of a particular study. Much of this should be handled in the discussion, unless it is more appropriate to address in the literature review.
Give your paper a clear focus and organization: The introduction should make clear to both the writer and reader the scope of the paper and the major points to be covered. The body of the paper should be logically organized. Exclude material that is not clearly tied to the subject of the paper. The conclusion section should draw together and summarize the major points and the take-home message(s).

Style and Format: Use the following guidelines when writing your paper. Feel free to ask the instructor for clarification, suggestions, etc.

- The paper should be 8-10 pages in length (excluding the title page, abstract, references, and any tables or figures).
- Your paper should be typed, and double spaced.
- Use standard 8.5 x 11 inch paper with a margin of 1 inch on all sides.
- Use Times New Roman Font with a font size of 12.
- Organize your paper clearly and logically, and label each section accordingly.
- Number your pages.
- Turn a printed copy of your paper in to the instructor by the due date (05/01/13).

Organization: In almost all cases, the paper should have the sections described below, at a minimum. If you would like to structure your paper differently, please get permission from the instructor first. Within each section, you should include subsections and subheadings as needed. Except for the title page, each section should be clearly labeled:

- Title page: title, your name, and the course name and year.
- Abstract (200-300 words): a concise summary of your paper without citations.
- Introduction (~2 pages): outline the topic and/or question you are addressing, and a justification of the importance of the topic
- Literature review (~3-4 pages): an organized presentation of the literature that you have reviewed, all aimed carefully at your main topic or question
  - No quotes should be used. Everything should be paraphrased in your own words.
  - All material summarized from articles must be referenced and cited correctly (see below).
  - Good scientific writing is not typically a paragraph with a citation at the end. Nor is it useful to rely primarily on one article, or to use that article to find earlier ones and then cite what you have just read in the first one without reading the earlier ones.
  - You will see plenty of examples of how to write in the articles you read. Pay close attention to the writing in the introduction and discussion sections of those articles, use them for ideas, and follow the style of the one(s) that you like the most.
- Discussion (~2-3 pages): Confine your synthesis and ideas to this section. Minimize restating earlier material, except with brief summaries or references. If appropriate, make judgments about the weakness/strengths of studies you discuss.
  - The Discussion must include a subsection entitled “Implications for Hawai‘i” (or something along those lines).
Conclusions (~1-2 pages): Summarize the major points and findings from your paper.

References: Your proposal must include at least 10 appropriate references, and at least 5 published in 1995 or later. Most of your references (≥7) should be from the peer-reviewed literature (journal articles, edited book chapters, review articles, etc.). Do not include any references from the internet. The internet is a great source of information, and can be used to get you started, but it is almost impossible to verify the validity of the information found there. Try to find recent references (within the last 5-10 years) so that your review or analysis is up-to-date. Use the format of Forest Ecology and Management for your list of references, as well as for the parenthetical (i.e., in-text) citations throughout your paper (see http://ees.elsevier.com/foreco/ and click on “Guide for Authors”, and then “References”).

Bibliography: The paper should conclude with a list of the articles and books cited in the text. The order of references is alphabetical, and for the same author(s) chronological. The format for references to papers and books, and to chapters in books, is as follows:

Journal Article:

Book:

Chapter in an Edited Book:

Parenthetical (In-text) Citations: In the text, references should be made by giving the author and the year of publication in parentheses, e.g. (Lamb, 2006), except when the author’s name is part of the sentence, e.g. ‘Lamb (2006) showed that . . . ’. Where several references are cited together for a single point, they are listed in chronological order, separated by semicolons. When a paper written by two authors is cited, both names are given, e.g. (Lamb and Smith 2007); for three or more authors only the first name is given, followed by ‘et al.’, e.g. (Lamb et al. 2008).
**Academic Honest and Integrity:** Students are expected to conduct themselves with the utmost integrity. The University of Hawai‘i at Mānoa Student Conduct Code defines cheating and plagiarism as follows (http://www.manoa.hawaii.edu/students/conduct/):

**CHEATING** includes but is not limited to giving or receiving unauthorized assistance during an examination; obtaining unauthorized information about an examination before it is given; submitting another's work as one's own; using prohibited sources of information during an examination; fabricating or falsifying data in experiments and other research; altering the record of any grade; altering answers after an examination has been submitted; falsifying any official University record; or misrepresenting of facts in order to obtain exemptions from course requirements.

**PLAGIARISM** includes but is not limited to submitting, in fulfillment of an academic requirement, any work that has been copied in whole or in part from another individual's work without attributing that borrowed portion to the individual; neglecting to identify as a quotation another's idea and particular phrasing that was not assimilated into the student's language and style or paraphrasing a passage so that the reader is misled as to the source; submitting the same written or oral or artistic material in more than one course without obtaining authorization from the instructors involved; or "drylabbing," which includes obtaining and using experimental data and laboratory write-ups from other sections of a course or from previous terms.

**Cheating or plagiarism will result in an F for your term paper and for your final grade in the course.** It may also lead to other serious academic repercussions beyond this course (see http://studentaffairs.manoa.hawaii.edu/policies/conduct_code/).

**Information Resources:** The information for your paper will likely come from a variety of sources, but the vast majority of it should come from the peer-reviewed literature (journal articles, edited book chapters, etc.). A great place to start searching for available information is to use a search engine. My favorite place to search for information available in the literature is Web of Science, available to all UHM students through the online library resources. Another useful search engine is Google Scholar, at www.scholar.google.com.

**Helpful hints:** Writing is a time-consuming and, for most, difficult task. More time and practice always help. Put together an outline before you start writing. Define your terms clearly. Be accurate, concise, and to the point. Avoid the passive voice. Proofread and spell check. Have a friend proofread and spell check. Proofread and spell check again. Write about something interesting to you. Use your instructor and or the UHM writing center as a resource for advice.

These references may also be useful:

The librarians in the UHM Science Library are excellent sources of information on performing effective and efficient literature searches. Set up an appointment to meet with one if you need some guidance or help (Eileen Herring; eherring@hawaii.edu).
Potential topics: The following are examples of possible term paper topics. This is by no means an exhaustive list. In most cases, the topics listed are too broad and would need to be narrower in focus to be manageable (e.g., focusing on a given type of forest, a given region, etc.). You may want to consider these as potential general areas in which to start your term paper. Please feel free to come up with your own ideas.

1) Carbon sequestration & forest management
2) Restoration of forests on degraded land
3) Mixed species silviculture (nutrient management, etc.)
4) Plantation silviculture in the tropics
5) Managing forests for non-timber forest products (NTFPs)
6) Silviculture of Acacia koa (or any other important species)
7) Impact of climate change on forest ecosystems
8) Reduced Impact Logging (RIL)
9) Impacts of harvesting on soils
10) Ecosystem-based forest management
11) Variable-retention harvest systems
12) Managing forests for wildlife habitat
13) Agroforestry in the tropics
14) Invasive Species (and/or Biocontrol)
15) Optimal design of conservation areas

Grading: You will be graded on content, accuracy, style and creativity. Although your writing abilities are not the primary focus of this course (i.e., this is not a writing intensive course), your ability to communicate is essential to your professional success. Pay close attention to what you're writing. Spelling should not be a problem, since everyone can use a dictionary. You should have a friend or family member read your paper before you turn it in. Papers that do not meet or that exceed the page limit, do not use the appropriate format and style, have grammatical and spelling errors, etc. will result in point deductions. There is, however, no reason for anyone to lose any of these points. Just follow the instructions contained in this document and/or get help with writing from your instructor, a friend or colleague, or the UHM Writing Center.

The paper will primarily be graded on the following criteria:

• How well the instructions in this handout are followed
• The extent and quality of the reference material used
• The content of the paper, especially the documentation, synthesis and analysis of relevant material
• Organization, clarity and conciseness of writing
• Adherence to format and style criteria noted above
• Evidence of care in proofreading and editing

Specifically, the following rubric will be used for grading your term paper:
**Term Paper Grading Rubric**

Author: ____________________  
Topic: _______________________________________________________________________

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<th>ITEM (15 pts for each component*)</th>
<th>COMMENTS</th>
<th>SCORE</th>
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<td><strong>Abstract:</strong> Does the abstract reflect the title of the project and the aim and scope of the work? Does it contain essential information on rationale, background, and significance? Is it written clearly?</td>
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<td><strong>Introduction:</strong> Does the introduction do a good job of introducing an important topic or question in applied forest ecology? Are the goals/objectives of the paper adequately introduced? Is the importance of the topic well justified? Are statements supported by appropriate citations from published literature, where appropriate?</td>
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<td><strong>Literature Review:</strong> Is the literature review an organized presentation of the literature that was reviewed? Is it aimed carefully at the main topic or question, and objective(s)? Are ideas paraphrased well? Are ideas synthesized from multiple sources?</td>
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<td><strong>Discussion:</strong> Is the literature well synthesized, and in your own words? Were the weakness and/or strengths of the topic discussed and analyzed? Was the study put into context for Hawai‘i?</td>
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<td><strong>Conclusions:</strong> Were the major points and findings from the paper summarized adequately?</td>
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<td><strong>References:</strong> Are the studies in the body of the paper cited in References? Are the citations in the References cited in the body of the text? Is appropriate formatting used for in-text and Reference citations? Were an appropriate number and kind of references used?</td>
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<td><strong>Overall Presentation and Clarity:</strong> Are the different sections of the paper well linked? Are the ideas presented clearly and can they be followed from one section of the paper to the next? Is the writing style clear (topic sentences introduce themes presented in each paragraph; concise language used; spelling and grammar acceptable)? Use of tense and active/passive voice is consistent? Did the writer follow overall instructions for content, format, etc.?</td>
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*Which sums to 105…You will automatically receive 5 bonus (or freebie) points by turning everything in on time (topic and final paper).*